BROWNING®

The Best There Is.

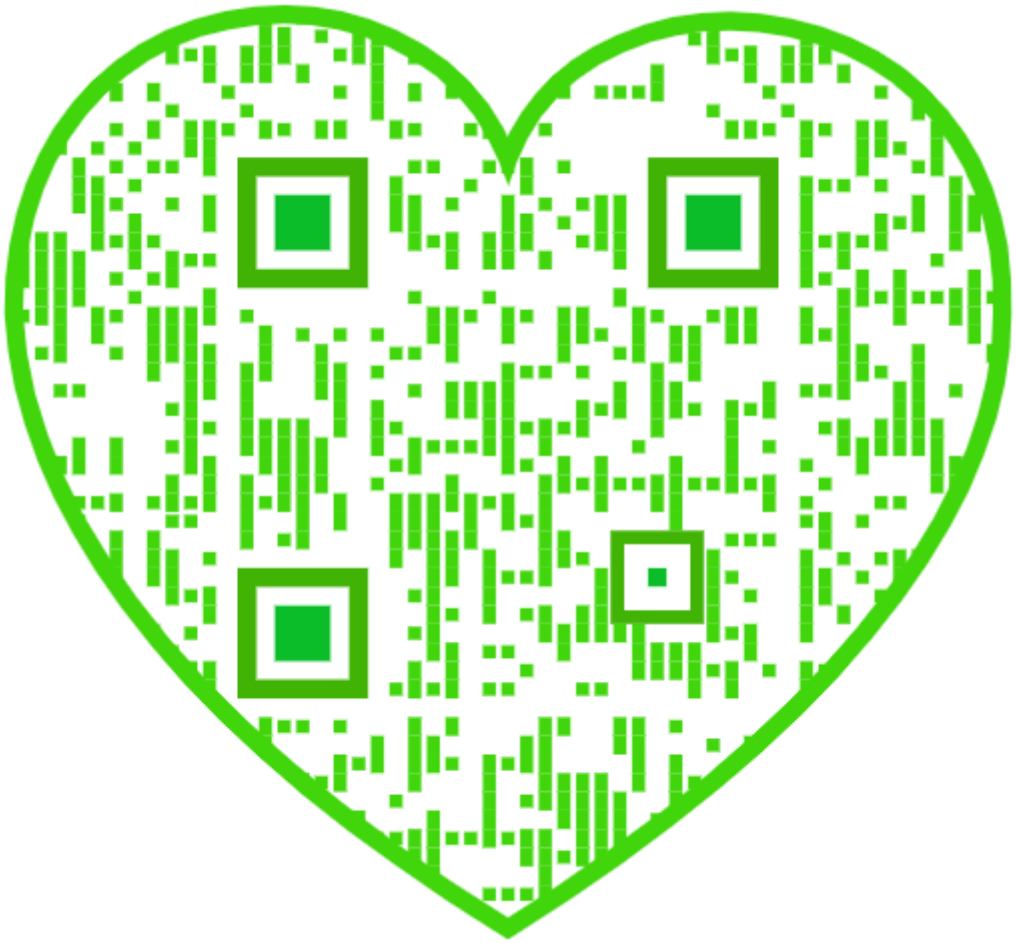
OWNER'S MANUAL

VERY IMPORTANT:

Save This Booklet. *Carefully read this entire manual before using your new Browning firea*

22 SEMI-AUTO

22 CALIBER RIFLE



NEW GUN OWNERS RECORD

KEEP THIS RECORD FOR FUTURE REFERENCE

Browning Model _____

Serial Number _____

Gauge / Caliber _____

Purchase Price _____

Purchased From _____

Date of Purchase _____

We are pleased that you have chosen a Browning 22 Semi-Auto semi-automatic rifle.

The 22 Semi-Auto is certainly a rifle you can be proud to own. It has an unequaled reputation for dependability and good handling. The semi-automatic action gives you rapid fire and unexcelled accuracy.

The 22 Semi-Auto is a true Browning — designed by the master gunmaker John Moses Browning himself. It was revolutionary in its day, and remains the standard by which other .22 caliber semi-automatics are judged. Your current 22 Semi-Auto rifle follows the great Browning tradition — superb craftsmanship, handsome styling and proven dependability. With a reasonable amount of care, your 22 Semi-Auto should give you many years of dependable, enjoyable service.

Please feel free to write us immediately if you have any observations regarding its performance and operation.

BROWNING®

Route One, Morgan, Utah 84050

Distributed in Canada by Browning Canada Sports Ltd/Ltee, St-Laurent, Quebec H4S 1W6

Printed in Japan 97055

22 SEMI-AUTO 22 CALIBER RIFLE

You Are Responsible For Firearms Safety

As a gun owner, you accept a set of demanding responsibilities. How seriously you take these responsibilities can be the difference between life and death.

There is no excuse for careless or abusive handling of any firearm. At all times handle your 22 Semi-Auto and any other firearm with intense respect for its power and potential danger.

READ AND UNDERSTAND ALL THE PROPER HANDLING AND INSTRUCTION PROCEDURES OUTLINED IN THIS BOOKLET BEFORE USING YOUR NEW FIREARM.

1 ***ALWAYS KEEP THE MUZZLE OF YOUR 22 SEMI-AUTO POINTED IN A SAFE DIRECTION.*** Never point your rifle at anything you do not intend to shoot.

2 ***DO NOT RELY TOTALLY ON YOUR FIREARM'S MECHANICAL "SAFETY" DEVICES. ALWAYS ASSUME THAT YOUR 22 SEMI-AUTO CAN BE FIRED WITH THE SAFETY ON.*** The word "safety" describes a gun's blocking or disengaging mechanism for the trigger, sear, hammer and/or firing pin. Although mechanical devices place your 22 Semi-Auto rifle in a ***safer*** status, no guarantee can be made that the rifle will not fire even if the "safety" is on the "on safe" position.

Like any mechanical device a safety can sometimes fail; it can be jarred or inadvertently manipulated into an unsafe condition. Mechanical "safeties" merely aid safe gun handling and are no excuse for pointing your rifle's muzzle in an unsafe direction.

Safe gun handling does not stop with your gun's mechanical "safety" devices. It starts there. Always treat your firearm with the respect due a loaded, ready-to-fire gun.

3 ***WHENEVER YOU HANDLE YOUR 22 SEMI-AUTO, OR HAND IT TO SOMEONE, FIRST, MAKE SURE THE SAFETY IS IN THE "ON SAFE" POSITION, AND THEN ALWAYS OPEN THE ACTION IMMEDIATELY*** and visually check the chamber, receiver cavity and magazine to be certain they do not contain any ammunition. (See section titled "Unloading Without Firing" on page 7 for unloading information.)

4 ***DO NOT TRANSPORT YOUR 22 SEMI- AUTO LOADED,*** whether in a scabbard, gun case, or other container.

5 ***BEWARE OF BARREL OBSTRUCTIONS.*** Always check the barrel of your 22 Semi-Auto if there is any question about there being an obstruction. ***TO DO THIS ALWAYS REMOVE THE BARREL FROM THE RECEIVER.*** Before you check for a barrel obstruction be sure to open the action, clear the magazine, and inspect the chamber. ***BE CERTAIN NO LIVE ROUND IS IN THE CHAMBER.*** Then remove the barrel from the receiver as explained on page 6, and glance down the barrel to be sure it is clear of any obstruction. It takes only a small obstruction to dangerously increase pressures. Before the first firing, clean the bore with a cleaning rod and patch, and wipe away any anti-rust compounds in the chamber and around the action. See "Care and Cleaning" on page 15.

6 ***BE CERTAIN YOUR RIFLE IS UNLOADED BEFORE CLEANING.*** Because so many gun accidents occur when a firearm is being cleaned, special and extreme care should be taken to be sure your rifle is unloaded before disassembly, cleaning and reassembly. Keep ammunition away from the cleaning location.

Never test the mechanical function of any firearm with live ammunition.

7 ***ALWAYS UNLOAD YOUR GUN WHEN NOT IN USE.*** Your responsibilities do not end when your firearm is unattended. Store your gun and ammunition separately and well beyond the reach of children.

Take all safeguards to ensure your gun does not become available to untrained, inexperienced or unwelcome hands.

8 ***USE THE PROPER AMMUNITION.*** The barrel and action of this rifle have been made with substantial safety margins over the pressures developed by established American commercial loads. ***Nevertheless, Browning assumes no liability for accidents which occur through the use of cartridges of nonstandard dimensions or which develop pressures in excess of commercially available ammunition which has been loaded in accordance with standards established by SAAMI (Sporting Arms and Ammunition Manufacturers' Institute).***

9 ***EXAMINE EVERY CARTRIDGE YOU PUT IN YOUR 22 SEMI-AUTO RIFLE.*** The caliber of your 22 Semi-Auto is inscribed on the right side of the barrel. ***The current model Browning 22 Semi-Auto is designed for .22 Long Rifle cartridges only. Do not use magnum cartridges.*** Browning cannot assume any responsibility for the use of unsafe or improper arms and ammunition combinations. It is your responsibility to read and heed all warnings, including those that appear in the instruction manual and on ammunition boxes.

Serious injury to yourself and damage to your gun may result from improper cartridge use.

10 ***DO NOT SNAP THE FIRING PIN ON AN EMPTY CHAMBER — THE CHAMBER MAY NOT BE EMPTY!*** Treat every gun with the respect due a loaded gun, even though you are certain the gun is unloaded.

11 ***KEEP YOUR FINGER AWAY FROM THE TRIGGER WHILE UNLOADING AND LOADING — UNTIL YOU ARE READY TO SHOOT.***

12 ***BE SURE OF YOUR TARGET AND BACKSTOP,*** particularly during low light periods. Know the range of your ammunition. Never shoot at water or hard objects.

13 ***HUNTING FROM ELEVATED SURFACES SUCH AS TREE STANDS IS DANGEROUS*** and may increase the risk of mishandling your firearm. The following rules should always be observed by you and those you hunt with: ***Always*** make certain that the stand being used is safe and stable; ***Always*** make certain that your firearm is unloaded when it is being taken up and down the stand; ***Always*** make certain that your firearm is not dropped from the stand, or dropped while it is being taken up or down the stand. Remember, a loaded firearm may discharge when dropped, even with the safety on.

14 ***DROPPING YOUR 22 SEMI-AUTO WHEN LOADED CAN CAUSE AN ACCIDENTAL DISCHARGE EVEN WITH THE SAFETY IN THE "ON SAFE" POSITION.*** Be extremely careful while hunting or during any shooting activity, to avoid dropping any firearm.

15 ***ALWAYS UNLOAD YOUR RIFLE'S CHAMBER AND OPEN THE BOLT BEFORE CROSSING A FENCE, CLIMBING A TREE, JUMPING A DITCH OR NEGOTIATING OTHER OBSTACLES.*** Never lean or place your 22 Semi-Auto rifle against a fence, tree, car or other similar object.

16 ***IF YOUR 22 SEMI-AUTO FAILS TO FIRE, KEEP THE MUZZLE POINTED IN A SAFE DIRECTION.*** Hold this position for a minimum of 30 seconds. Carefully open the action and remove the cartridge. If the rim (primer) is indented, the cartridge should be disposed of in a way that cannot cause harm. If the rim (primer) is not indented, your firearm should be examined by a qualified gunsmith and the cause of the malfunction should be corrected before further use.

17 ***WEAR EYE AND EAR PROTECTION WHEN SHOOTING.*** Unprotected, repeated exposure to gunfire can cause hearing damage. Wear ear protectors to guard against such damage. Wear shooting glasses to protect your eyes from flying particles. Also, wear eye protection when disassembling and cleaning your rifle to prevent the possibility of springs, spring-tensioned parts, solvents or other agents from coming in contact with your eyes.

18 ***BE DEFENSIVE AND ON GUARD AGAINST UNSAFE GUN HANDLING AROUND YOU AND OTHERS.*** Don't be timid when it comes to gun safety. If you observe other shooters violating any of these safety precautions, politely suggest safer handling practices.

19 ***SUPERVISE AND TEACH FIREARMS SAFETY TO ALL MEMBERS OF YOUR FAMILY —*** especially to children and nonshooters. Closely supervise newcomers to the shooting sports. Encourage enrollment in hunting/shooting safety courses.

20 ***NEVER DRINK ALCOHOLIC BEVERAGES OR TAKE ANY TYPE OF DRUGS BEFORE OR DURING SHOOTING.*** Your vision and judgment could be dangerously impaired, making your gun handling unsafe to you or to others.

21 ***PERIODIC MAINTENANCE — AVOID UNAUTHORIZED SERVICING.*** Your 22 Semi-Auto is a mechanical device which will not last forever, and as such, is subject to wear and requires periodic inspection, adjustment, and service. Like all Browning firearms, your 22 Semi-Auto should be serviced by a Browning Recommended Service Center or by Browning's service facility in Arnold, Missouri. Browning cannot assume any responsibility for injuries suffered or caused by lack of servicing or unauthorized servicing, alterations or modifications of Browning firearms.

IT CAN BE VERY DANGEROUS TO ALTER THE TRIGGER OR OTHER FIRING MECHANISM PARTS OF THIS OR ANY OTHER FIREARM.

BE CAREFUL!

General Operation

Your new Browning is a blow-back type action, semi-automatic repeating rifle. With cartridges in the magazine and one in the chamber and the safety in the off safe or fire position, the rifle will fire a single round with each successive pull of the trigger until the magazine and chamber are empty.

Nomenclature

In conventional gun terminology the position and movement of gun parts are described as they occur with the rifle horizontal and in normal firing position: i.e., the muzzle is forward or front; the butt stock is rearward or rear; the trigger is downward or underneath; and the sights are upward or on top. For general nomenclature used in this manual refer to Figure 1.

Serial Number

You will find the serial number of your rifle stamped at the lower rear of the right side of the receiver.

Initial Cleaning

BEFORE THE FIRST FIRING, CLEAN THE ANTI-RUST COMPOUND from the inside of the barrel and the outside of the barrel and receiver with a clean rag and light gun oil such as Browning Oil. (See "Care and Cleaning" on page 15.)

Ammunition

The Browning 22 Semi-Auto semi-automatic rifle must be used only with ***.22 CALIBER RIMFIRE AMMUNITION AS DESIGNATED ON THE BARREL .*** Current models are designed and chambered for .22 caliber Long Rifle cartridges. Do not shoot blanks or bird shot cartridges in your 22 Semi-Auto. Always read the ammunition box label and any enclosures provided with your ammunition.

Figure 1

A. Trigger
B. Barrel
C. Trigger Guard
D. Receiver
E. Trigger Assembly
F. Breechblock
G. Buttstock
H. Forearm
I. Loading Port
J. Finger Piece
K. Magazine Tube
L. Barrel Take-up Adjusting Ring
M. Safety
N. Barrel Lock

Operation of the Safety

A crossbolt type safety is conveniently located in the forward part of the trigger guard. This safety device blocks trigger movement when in the "on safe" position. When the rifle is "on safe", the large head of the safety on the right side of the trigger guard (see Figure 2) protrudes out from the trigger guard. When the large head of the safety is pushed inward (from right to left) against the trigger guard, a red warning dot appears on the small head side of the safety bolt, indicating the rifle is ready to fire. To move the safety "on safe", press the head of the safety bolt from left to right. A left-hand safety can be installed on this rifle in which case the "on safe" and off safe directions given above are reversed.

Figure 2

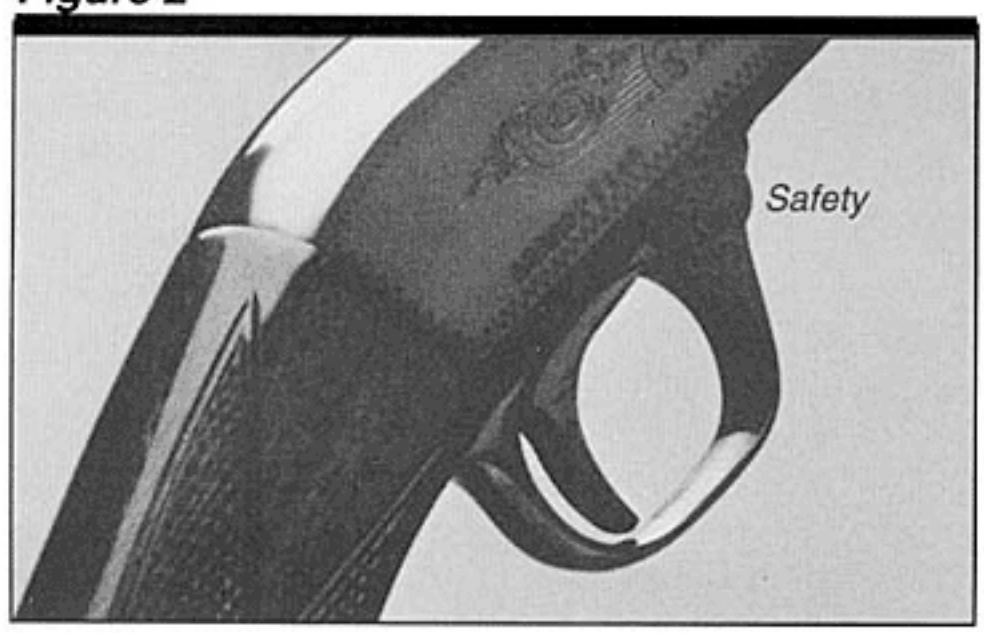
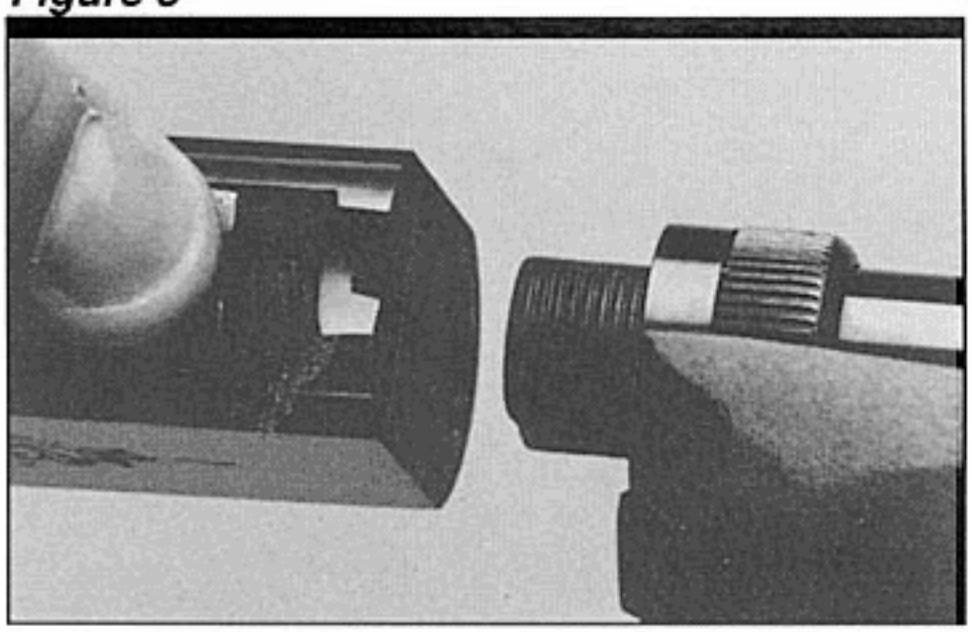
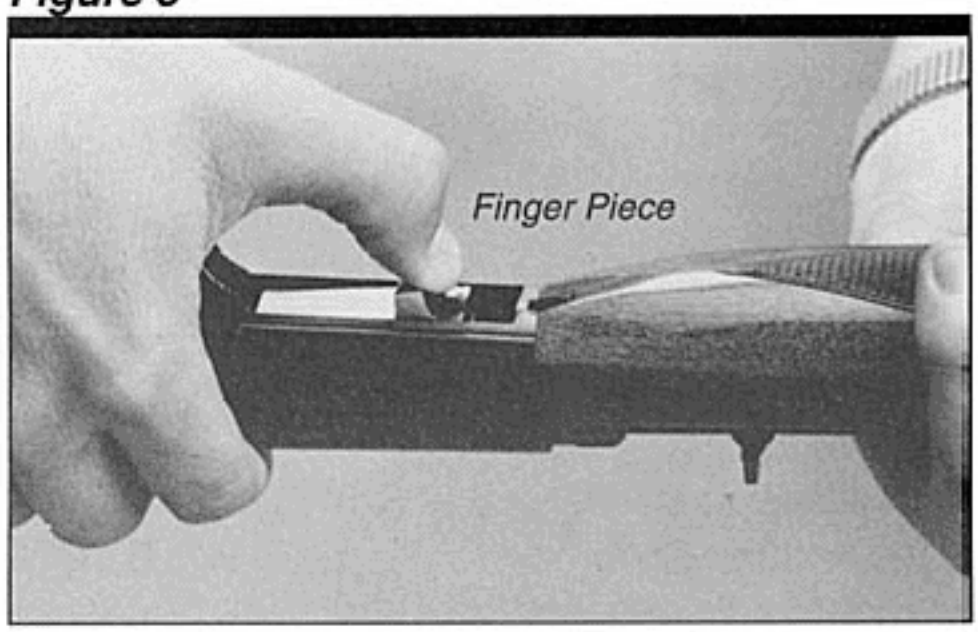


Figure 3



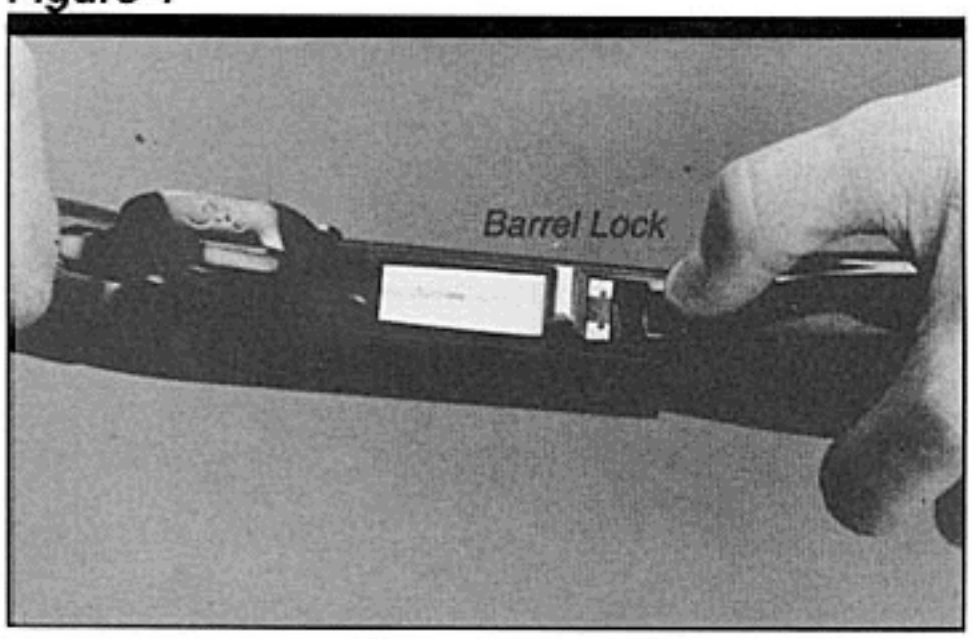
WHENEVER A CARTRIDGE IS CHAMBERED, THE RIFLE SHOULD BE KEPT IN THE "ON SAFE" POSITION UNTIL YOU ARE READY TO FIRE IT. In fact, it is a good practice to ***KEEP THE SAFETY IN ITS "ON SAFE" POSITION AT ALL TIMES,*** even when the rifle is unloaded, except when actually firing the rifle.

Figure 5



about 1/2" with your thumb (see Figure 3). Insert the barrel into the *receiver* as far as it will go. Be sure to hold the receiver when turning the barrel to connect it to the receiver. ***HOLDING THE GUN BY THE STOCK DURING THIS PROCEDURE MAY DAMAGE THE STOCK.*** Turn the receiver clockwise 1/4 turn until it stops in proper alignment with the receiver/stock: sights on top and forearm down. Release the finger piece allowing the

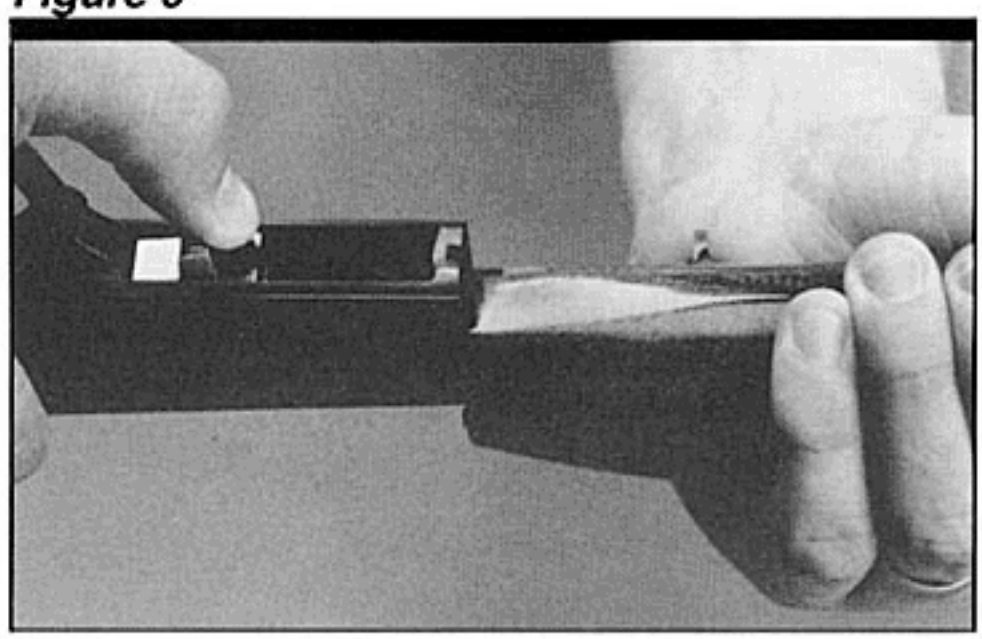
Figure 4



How to Assemble Your 22 Semi-Auto

Your 22 Semi-Auto is usually supplied in its box, taken down, with the barrel removed from the receiver. To assemble the barrel to the receiver, first move the safety to the "on safe" position. Then make sure that the barrel lock is in the forward position. Hold the barrel by the forearm, with the left hand, with the sights upward. Hold the receiver ***RIGHT SIDE UP*** in the right hand, while at the same time retracting the breechblock

Figure 6

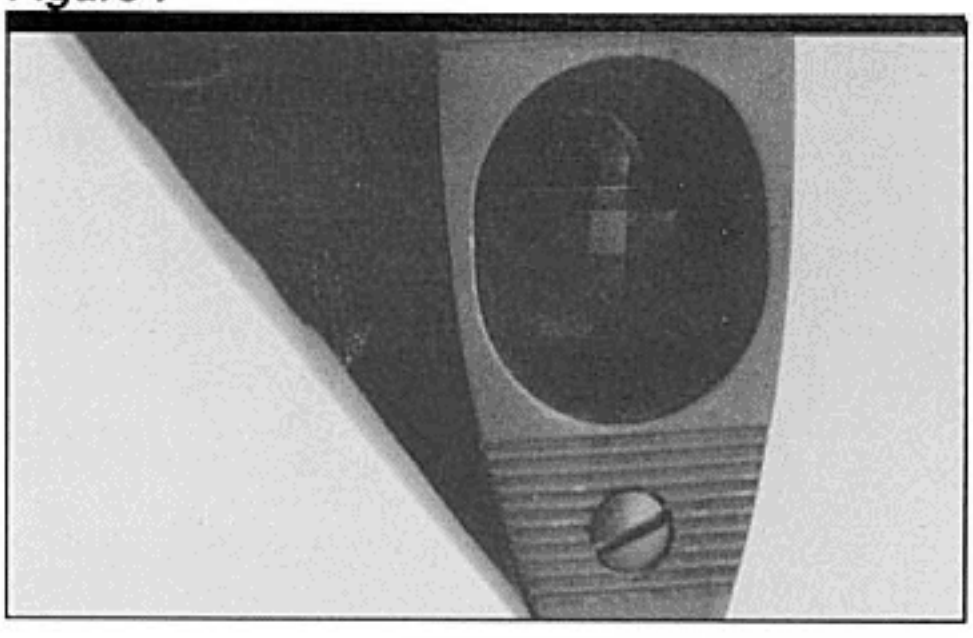


breechblock to go fully forward. Lock the barrel into position by drawing the barrel lock rearward (see Figure 4).

Removing the Barrel from the Receiver

Holding the rifle upside down, push the barrel lock forward. Draw the breechblock back 1/4 inch or more, by the finger piece (see Figure 5), and hold with the thumb of the right hand. Give the barrel a 1/4 turn clockwise and separate the two pieces (see Figure 6). Removing the barrel from

Figure 7

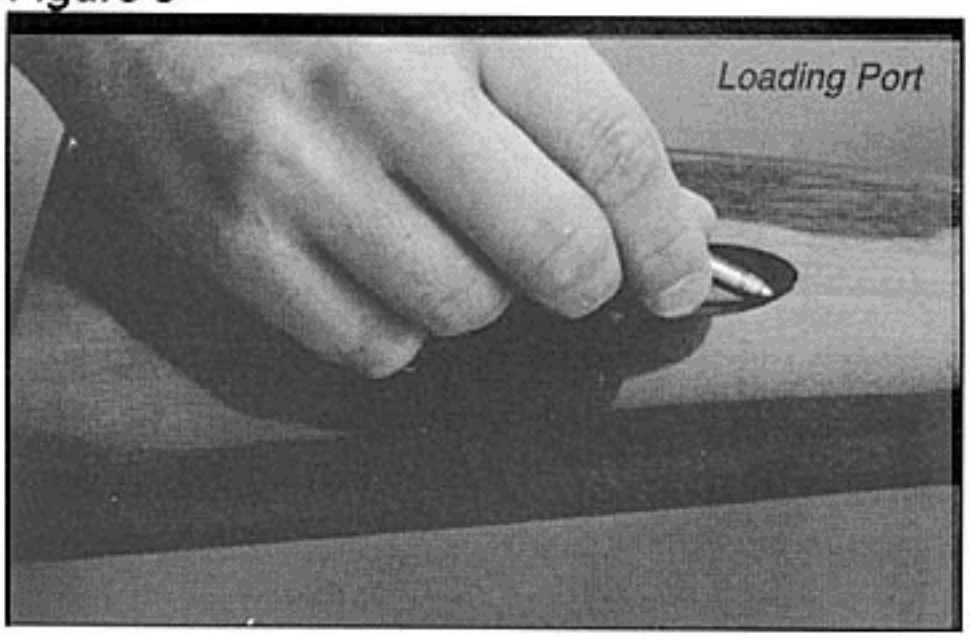


the receiver is necessary for cleaning, and is also a safe, convenient way to store your 22 Semi-Auto.

Loading the Magazine

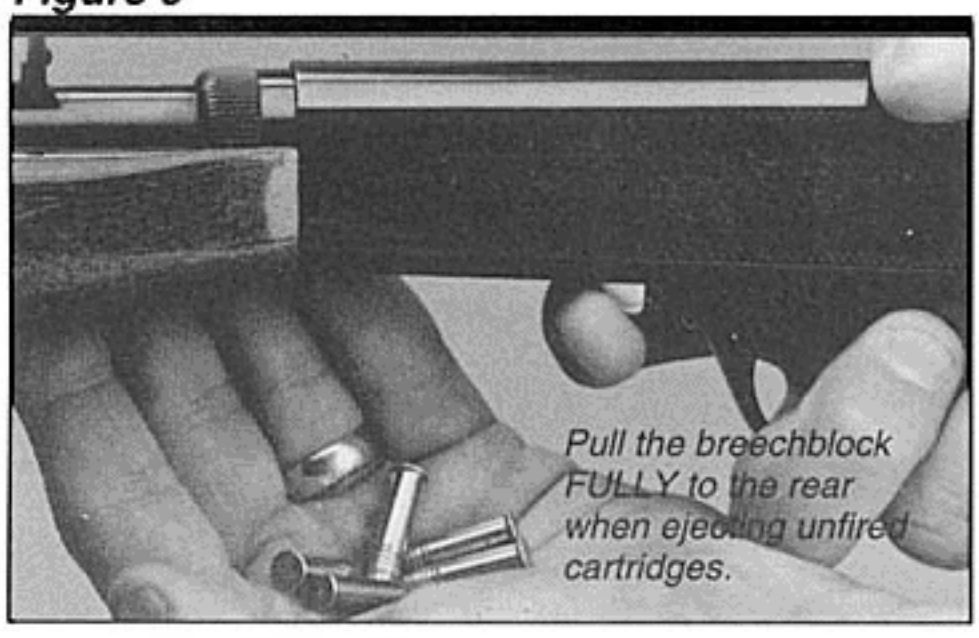
After being certain that the safety is in the "on safe" position, turn the serrated magazine tab located in the butt plate (see Figure 7) 1/4 turn and pull the magazine rod assembly straight back until it stops. Drop the cartridges into the opening in

Figure 8



the side of the stock, bullet forward (see Figure 8). The magazine holds 11 cartridges of .22 Long Rifle. Push the magazine assembly completely into the stock and turn approximately 1/4 turn either way to lock. If the magazine does not push in freely, turn it alternately right and left and at the same time push forward. The magazine will not lock unless completely forward.

Figure 9



Loading a Round Into the Chamber

After loading the magazine, and double checking to be sure the rifle is "on safe", withdraw the breechblock as far as it will go by pulling rearwards on the finger piece of the breechblock. Then release the finger piece allowing it to spring forward of its own accord. This procedure feeds the first cartridge into the chamber and the rifle is ready for firing. Subsequent feeding and ejection operations are performed automatically until the rifle is empty. When the rifle is not actually being fired, ***ALWAYS KEEP THE SAFETY IN THE "ON SAFE" POSITION.***

Unloading Without Firing

There are two ways to unload your Browning 22 Semi-Auto without firing. Both unloading procedures should always be accomplished with the safety in the "on safe" position and with the barrel pointing in a safe direction.

UNLOADING BY CYCLING THE ACTION —
To unload unfired shells merely work the breechblock FULLY TO THE REAR, and back and forth until all cartridges have been individually ejected (see Figure 9). As a safety precaution, always ***WORK THE BREECHBLOCK FULLY TO THE REAR SEVERAL TIMES AFTER THE LAST UNFIRED CARTRIDGE HAS BEEN DELIVERED*** through the

Figure 10

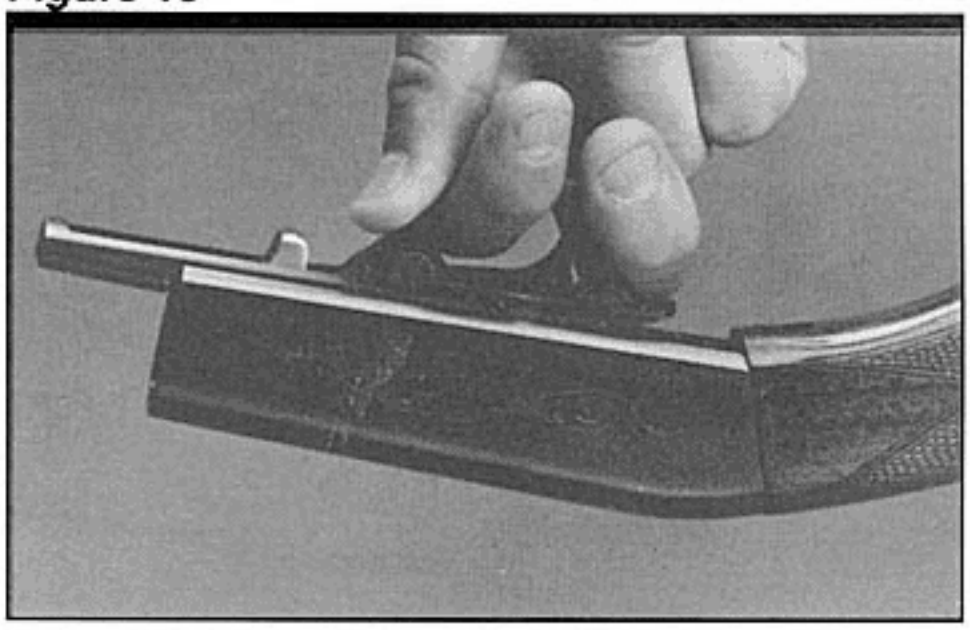
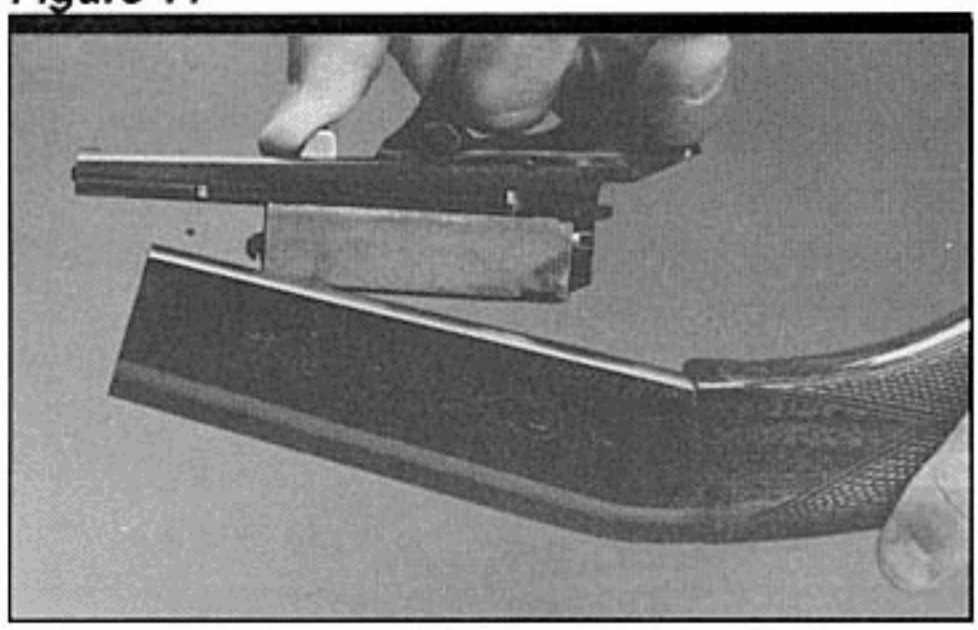


Figure 11



ejection opening to make sure no cartridge is left in the chamber. Then, check visually by holding the breechblock rearward with the thumb and looking into the receiver cavity, paying special attention to the magazine feed mechanism, to be sure no cartridges remain.

UNLOADING THROUGH THE MAGAZINE—

With the barrel pointed slightly downward, pull the magazine rearward as explained above in "Loading the Magazine" on page 7. With the magazine extended from the buttplate, grasp the serrated magazine tab in one hand and turn the magazine assembly about 1/8 of a turn. Simultaneously pull the magazine rearward. The magazine assembly will come free and can be fully removed out the buttplate. Hold the rifle butt down and dump the cartridges into your free hand through the hole in the buttplate. Replace the magazine tube assembly and lock it in position. Work the action back and forth several times ***WORKING IT FULLY TO THE REAR.***

Invert the rifle and visually inspect the chamber and receiver cavity, paying special attention to the magazine feed mechanism, to be sure no cartridges remain.

Disassembling the Mechanism

WEAR EYE PROTECTION DURING ALL DISASSEMBLY PROCEDURES.

To give your rifle proper care, further disassembly is occasionally required. Before beginning any disassembly procedure ***MAKE SURE YOUR RIFLE IS FULLY UNLOADED*** as explained previously. Disassembly is very easy and may be accomplished as follows without the aid of tools:

1 After removing the barrel (see "Removing the Barrel from the Receiver" on page 6), push the trigger guard forward about 1 1/4" until the rails on the trigger guard clear the grooves in the receiver (see Figure 10). While holding the breechblock rearward with the thumb, pivot the rear end of the trigger guard away from the receiver (see Figure 11). This procedure removes the entire trigger assembly and breechblock and is an ordinarily sufficient disassembly for normal cleaning.

   Be careful not to lose the cartridge stop located in the top of the receiver cavity. It can easily be removed for cleaning by simply lifting it out. Replace with the smaller, rounded pin inserted in the hole toward the front of the receiver, and

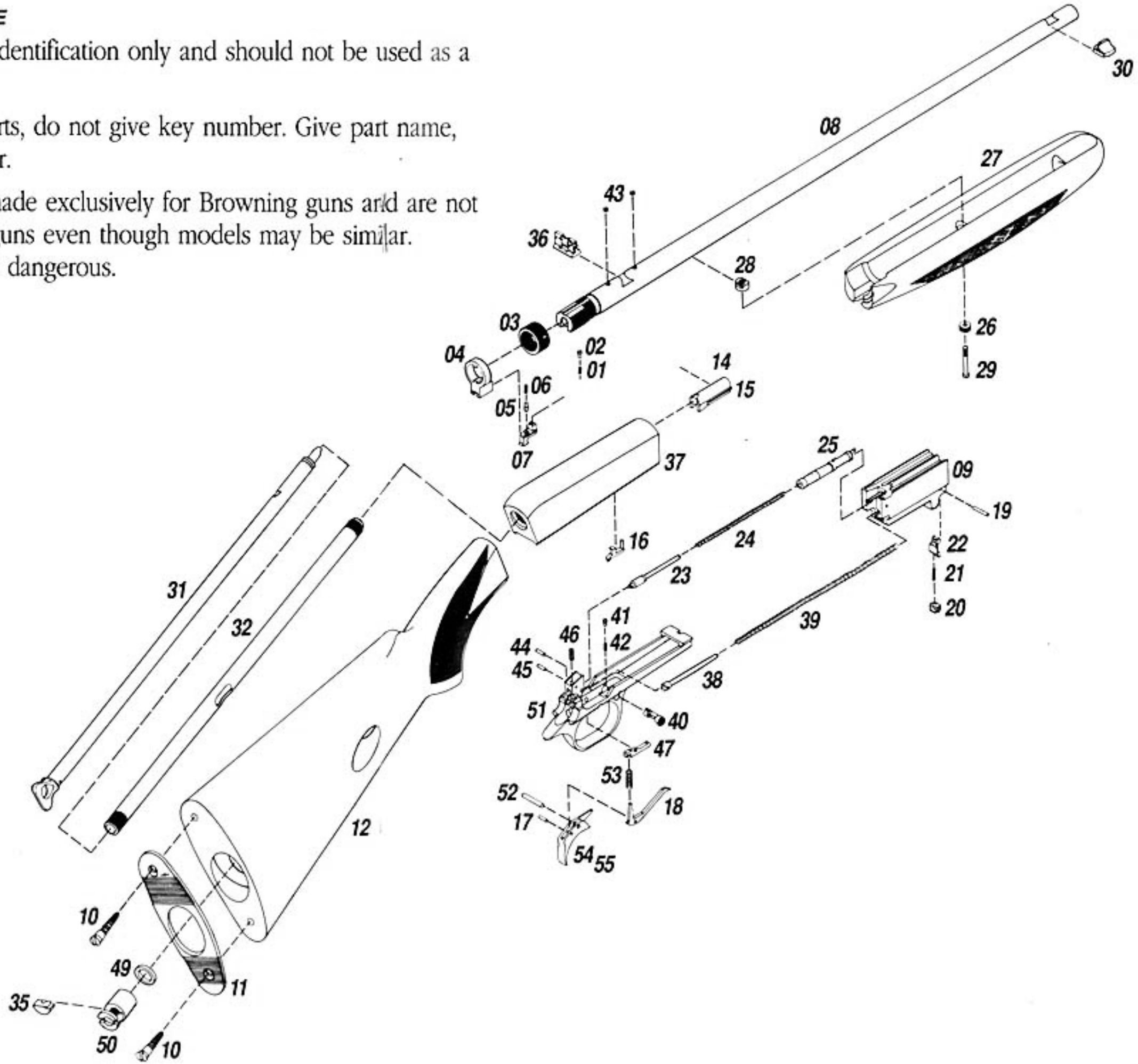
(Continued on page 11)

BROWNING 22 SEMI-AUTO RIFLE

Schematic is provided for parts identification only and should not be used as a guide to assemble guns.

IMPORTANT: When ordering parts, do not give key number. Give part name, caliber, model and serial number.

CAUTION: Browning parts are made exclusively for Browning guns and are not recommended for use in other guns even though models may be similar. Inadequately fitted parts may be dangerous.



Browning 22 Semi-Auto Parts List

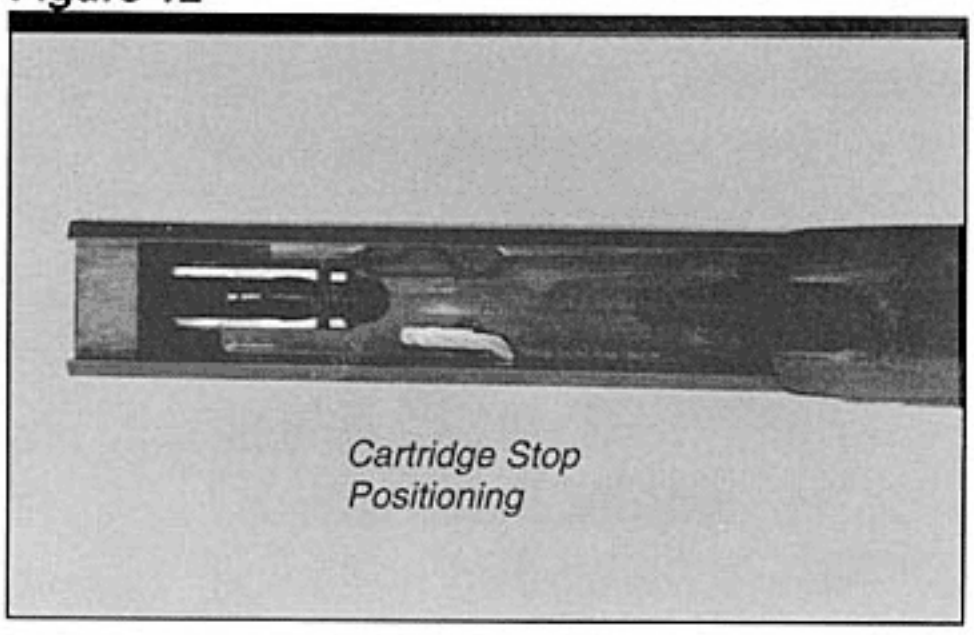
KEY NO.	PART NO.	DESCRIPTION
01	PO66553	Barrel Adjusting Ring Follower Spring
02	PO66552	Barrel Adjusting Ring Follower
03	PO66546	Barrel Adjusting Ring
04	PO66545	Barrel Lock Ring
05	PO66549	Barrel Lock Spring Plunger
06	PO66548	Barrel Lock Spring
07	PO66550	Barrel Lock
08	*PO66530	Barrel
09	*PO66620	Breechblock
10	PO66925	Butt Plate Screw
11	*PO66835	Butt Plate
12	*PO66820	Butt Stock
13	PO66825	Butt Stock Screw Escutcheon
14	PO66613	Cartridge Guide Spring
15	PO66596	Cartridge Guide
16	PO66586	Cartridge Stop
17	PO66738	Disconnector Pin
18	*PO66734	Disconnector
19	PO66656	Extractor Spring Retainer Pin
20	PO66650	Extractor Spring Retainer
21	PO66645	Extractor Spring
22	PO66637	Extractor
23	PO66670	Firing Pin Spring Guide
24	PO66665	Firing Pin Spring
25	PO66659	Firing Pin
26	PO66565	Forearm Escutcheon
27	*PO66555	Forearm
28	*PO66525	Forearm Retainer Stud
29	*PO66575	Forearm Screw
30	*PO66910	Front Sight Gold Bead
31	PO66861	Magazine Assembly
32	*PO66506	Magazine Tube Outer
33	PO66885	Magazine Tube Stop Plate Screw (not shown)
34	PO66875	Magazine Tube Stop Plate (not shown)
35	PO66840	Magazine Tube Stop Spring
36	*PO66899	Rear Sight Assembly, Folding Leaf
37	†*PO66521	Receiver
38	PO66680	Recoil Spring Guide
39	PO66675	Recoil Spring
40	*PO66748	Safety, Right & Left Hand
41	PO66765	Safety Spring Plunger
42	PO66755	Safety Spring
43	PO66902	Scope Mount Base Filler Screw
44	PO66698	Sear Pin
45	PO66744	Sear Spring Pin
46	PO66705	Sear Spring
47	*PO66694	Sear
48	PO66900	Sight Slot Blank Special Size (not shown)
49	PO66770	Stock Nut Washer
50	PO66769	Stock Nut 22
51	PO66687	Trigger Guard
52	PO66729	Trigger Pin
53	PO66725	Trigger Spring
54	*PO66712	Trigger, Left Hand
55	*PO66710	Trigger, Right Hand

** Indicates part must be fitted by Browning Service Department or qualified gunsmith.*

† Part may be purchased only by holders of current, valid Federal Firearms License.

Parts list refers to Grade I (standard models), 22 long rifle caliber only. When ordering parts for other Browning 22 Semi-Auto models please indicate grade, caliber (22 Long or Short), right- or left-handed, serial number, and whether it is an older style/discontinued model.

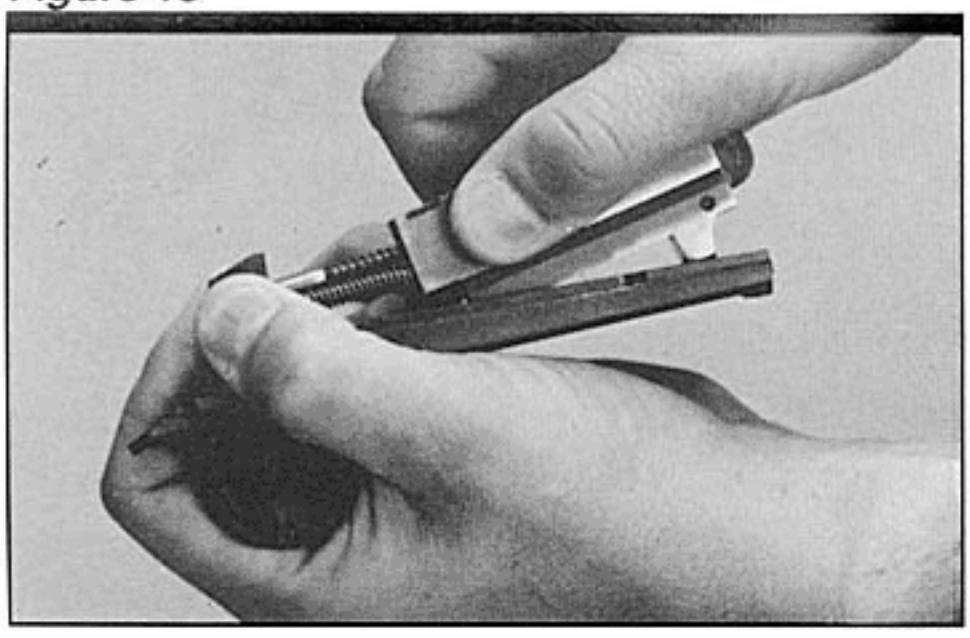
Figure 12



the larger, squared-off protrusion inserted in the larger round cavity (see Figure 12).

2 It requires some skill and practice to disassemble the rifle further, but should the need arise, proceed as follows: With the trigger assembly and breechblock in your hand, (removed from the receiver) place the "safety" in the off-safe position and release the firing pin

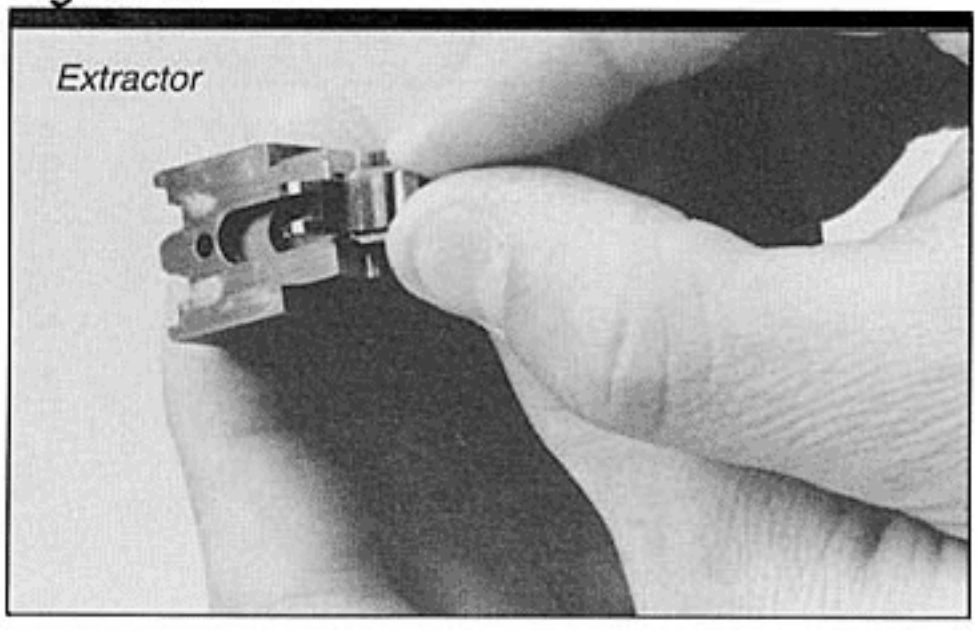
Figure 13



by pulling the trigger. Draw the breechblock back 1/4", then lift up on the forward end until the finger piece clears the trigger guard plate (see Figure 13). Allow the breechblock to travel forward slowly, holding the recoil spring between thumb and fingers to prevent its escape.

3 Remove the recoil spring, recoil spring guide, firing pin, firing pin spring, the firing pin spring

Figure 14



guide from the breechblock, and trigger guard housing for cleaning.

4 To remove the extractor, carefully punch out the extractor spring retaining pin, after which the extractor spring retainer, extractor spring, and extractor can be removed from the breechblock. The extractor spring retainer and spring are under tension, so take special care when removing the pin to prevent losing them. It is desirable to occasionally remove the carbon and residue that forms in the slot underneath the extractor. A good firearms cleaning solvent may be helpful.

Assembling the Mechanism

WEAR EYE PROTECTION DURING ALL REASSEMBLY PROCEDURES.

1 To reinstall the extractor, extractor spring, and extractor spring retainer, first, insert the extractor into the slot (see Figure 14).

Figure 15-A

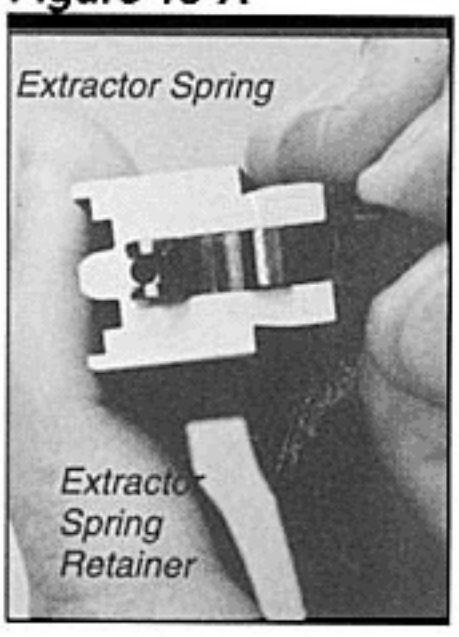


Figure 15-B

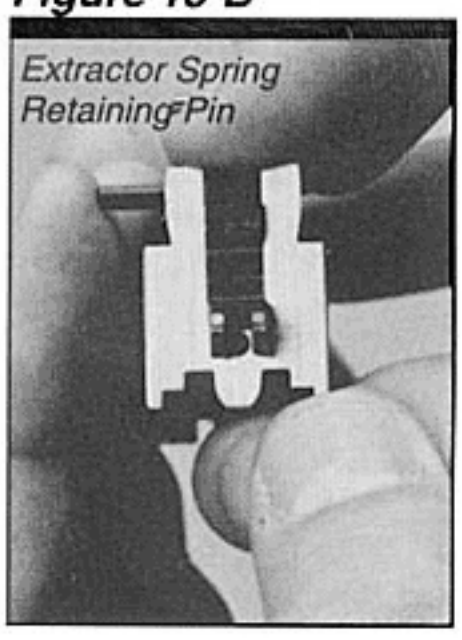
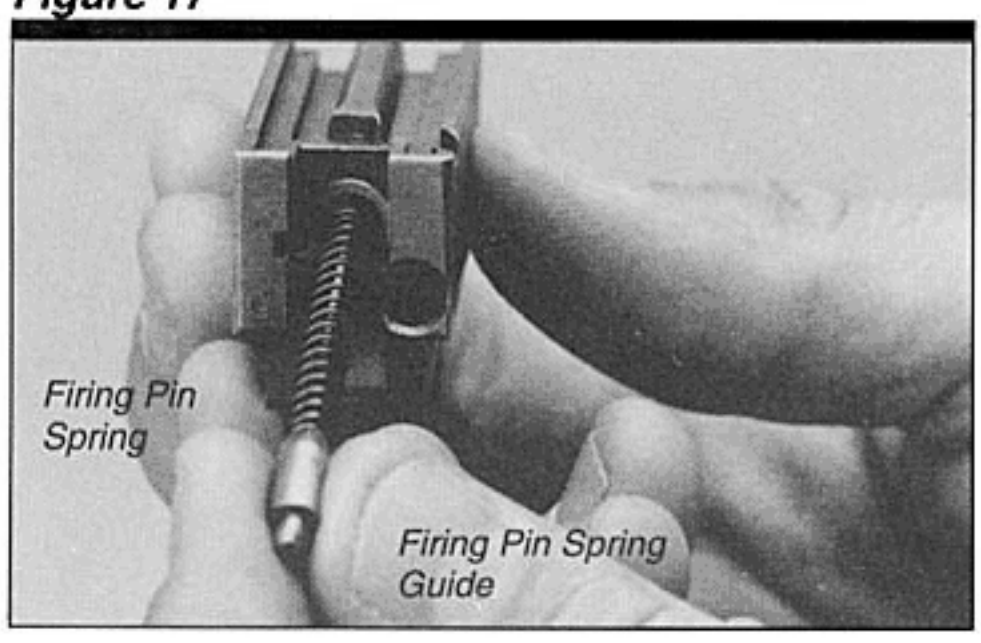


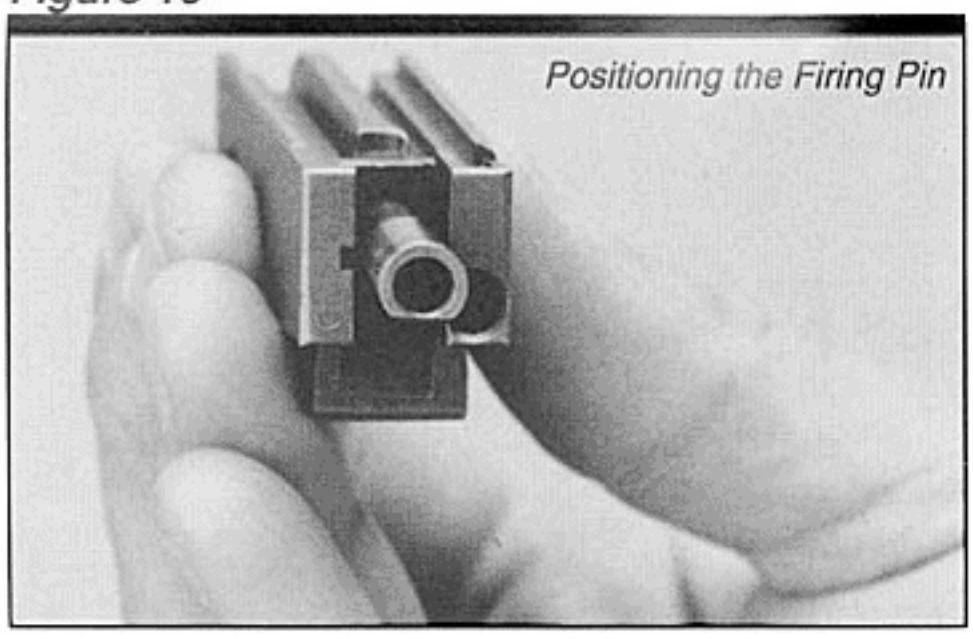
Figure 17



Then, insert the spring into the spring retainer and slide both parts into the slot (see Figure 15-A), holding the retainer against the spring tension while you slip the retaining pin in place (see Figure 15-B).

2 Reinstall the firing pin, firing pin spring, and firing pin spring guide in the breechblock. The firing pin is inserted pin end first. Line up the firing pin so that the pin portion of the firing pin aligns with the firing pin hole located at the front of the breechblock — the flattened edge on the rear of the firing pin will be facing downward (see Figure 16).

Figure 16

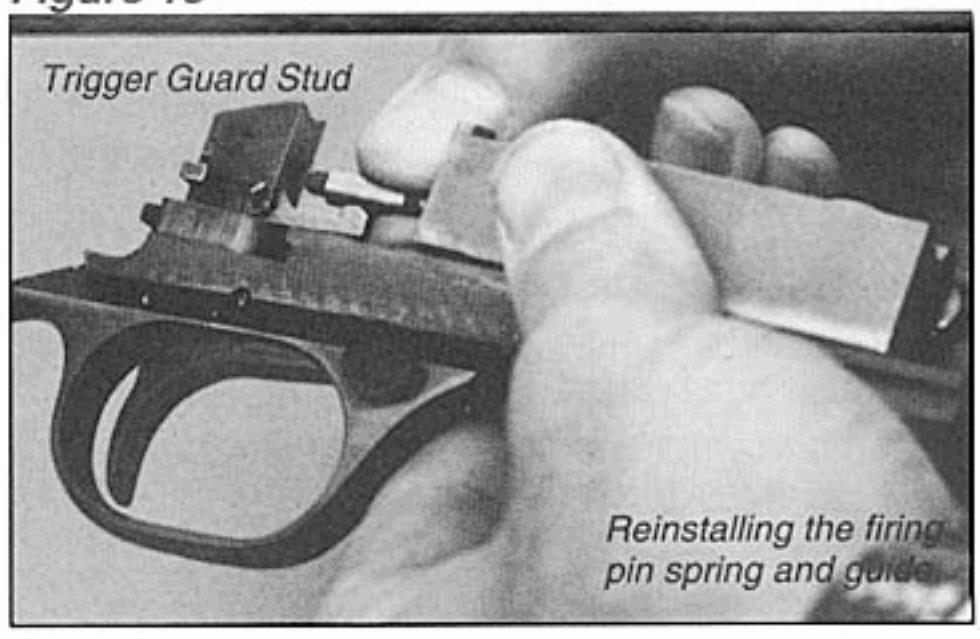


Reposition the firing pin spring and firing pin spring guide in the breechblock (see Figure 17).

3 Reinstall the breechblock assembly on the rails of the trigger guard.

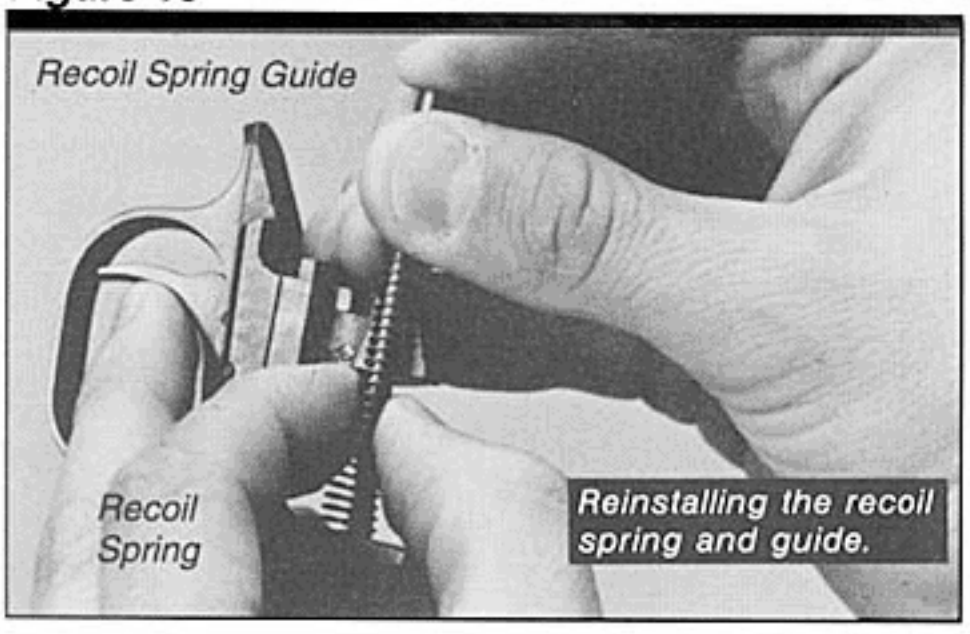
4 The firing pin spring guide is reinstalled on the trigger guard stud as follows: Grab the end of firing pin spring guide in your fingers and compress the spring forward, then position the end of the guide in the recess found in the trigger guard stud (see Figure 18).

Figure 18



5 To replace the recoil spring and recoil spring guide in the breechblock, proceed as follows: Holding the trigger guard and breechblock assembly in the left hand with the top side up and the rear of the trigger guard away from you, insert the recoil spring, with the recoil

Figure 19



guide inserted in the other end, into the recoil spring hole of the breechblock.

Place the index finger of your right hand over the end of the recoil spring guide, at the same time holding the recoil spring between the thumb and finger of the left hand (see Figure 19). Then compress the recoil spring into the recoil spring guide and, at the same time, feed both spring and guide into the breechblock un-

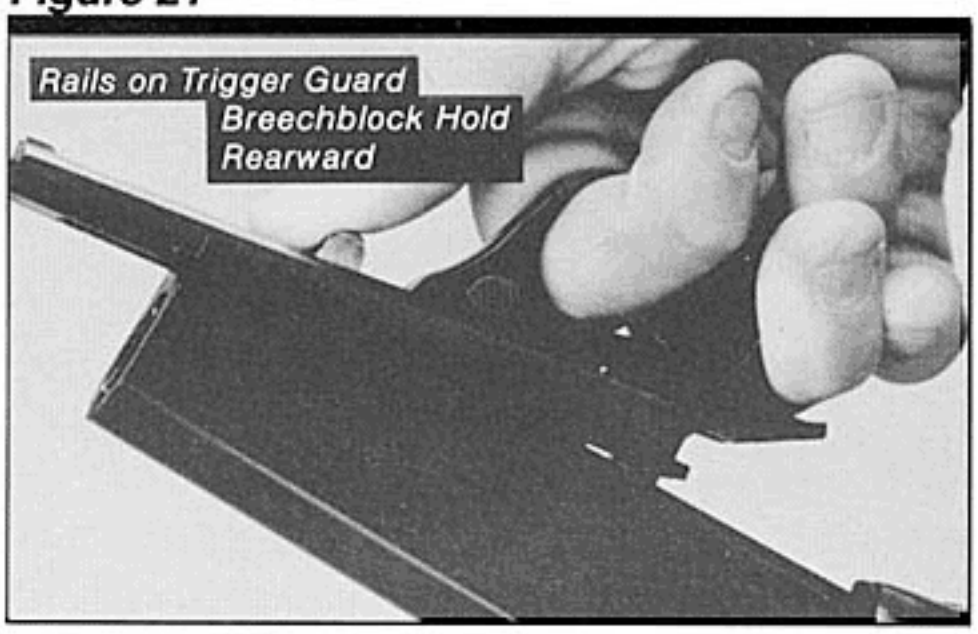
Figure 20

til the end of the recoil spring guide can be released against its retaining lug on the trigger guard stud (see Figure 20).

This operation is slightly difficult and requires some practice.

THESE PARTS ARE UNDER SPRING TENSION. TAKE SPECIAL CARE TO PREVENT THEM FROM FLYING OUT AND BECOMING LOST OR CAUSING INJURY.

Figure 21

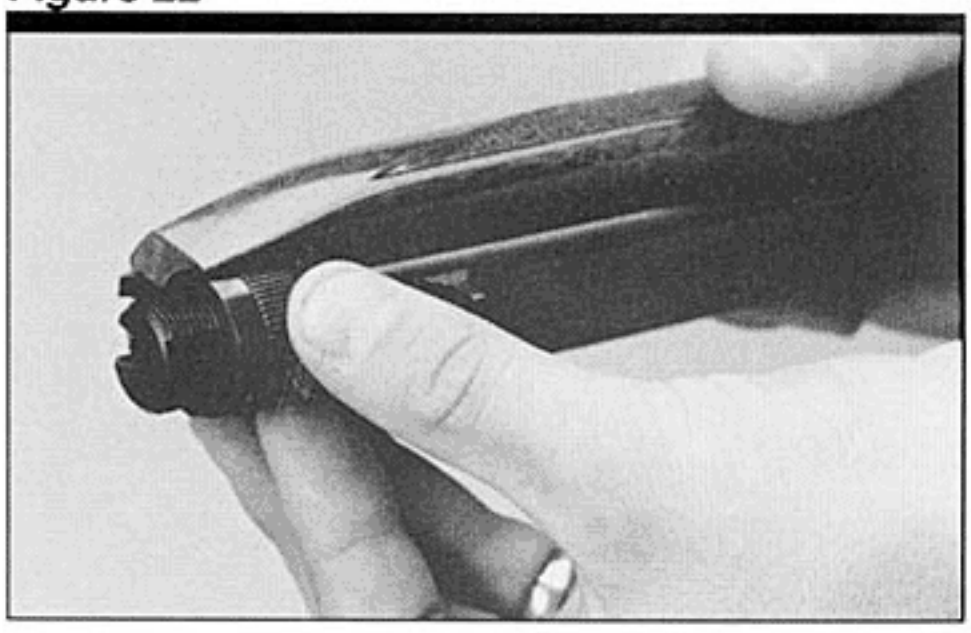


6 Before reinstalling the trigger guard/breechblock assemblies in the receiver make sure that the cartridge stop is positioned properly in the top of the receiver cavity. To do this, position the cartridge stop with the smaller, rounded pin inserted in the hole toward the front of the receiver, and the larger, squared-off protrusion inserted in the larger round cavity (see Figure 12 on page 11).

7 To replace the trigger guard and breechblock assembly in the receiver, hold the breechblock fully rearward with your thumb and insert the rear of the trigger guard rails into the front of the grooves in the receiver (see Figure 21).

Press the rear of the trigger guard into position in the receiver and slide rearward into place. Should the trigger guard fail to slip into position easily, draw the breechblock rearward and at the same time press down lightly in the trigger guard. Reinstall the barrel to the receiver as explained under "How to Assemble Your 22 Semi-Auto" on page 6.

Figure 22



Adjusting Barrel Fit (Barrel Take-up)

If, after time, the barrel remains loose when mounted to the receiver, an adjustment should be made. On current models, the serrated ring, located just forward of the breech end of the barrel, is merely turned toward the receiver as explained below.

1 First, remove the barrel from the stock/receiver portion of the rifle.

2 Then, holding the barrel with the muzzle pointed away from you, turn the adjusting ring to the left (counter-clockwise) the space of one notch (see Figure 22). An audible click will be heard for each notch the ring is turned.

3 Reassemble the rifle and check for fit. If still loose, repeat the process. Should you over tighten the barrel, (indicated by inability to assemble the barrel to the receiver), merely reverse the operation by turning the adjustment ring one or more notches in a clockwise direction.

TIGHT BARREL-TO-RECEIVER FIT IS EXTREMELY IMPORTANT FOR ACCURACY.

Sight Adjustment

The 22 Semi-Auto has an adjustable folding rear sight, and comes from the factory with sights set for a distance of 50 yards.

VERTICAL CORRECTION — To adjust the rear sight for vertical correction, loosen the two small locking screws in the face of the sight with a fine blade screwdriver. Next, move the plate with the "U" shaped notch up or down, as needed. Moving the plate up raises the point of impact.

Moving the plate down lowers the point of impact. When vertical correction is done, lock the two screws lightly, but firmly.

White graduation marks are etched into the body of the sight to help in zeroing and sighting-in. One graduation moves the point of impact approximately two inches at 50 yards.

WINDAGE CORRECTION — Lateral (or windage) adjustment should be correct at the time you purchase your gun. However, if needed, move either the front or rear sight to the right or left for lateral adjustment. Each of these sights is secured to the barrel in dovetail slots. Tap the sight at its base to move it in the direction desired. Keep this simple rule in mind: The rear sight should be moved the *same* direction you wish the point of bullet impact to move; the front sight should be moved in the opposite direction from that you wish the point of bullet impact to move. Making adjustment for windage is a process of trial and error. Fortunately, it is seldom necessary.

Scope Mount

All 22 Semi-Autos come drilled and tapped for mounting a rifle scope. Special mounts specifically designed for the Browning 22 Semi-Auto are recommended. These mounts attach to the barrel, not the receiver. This type of mounting permits take-down of the rifle without altering zero and further assures fine accuracy. (Use Browning barrel mount base No. 8517.)

Care and Cleaning

BE CERTAIN YOUR RIFLE IS UNLOADED AND ALWAYS WEAR EYE PROTECTION WHEN CLEANING YOUR RIFLE. (See section titled "Unloading Without Firing" on page 7 for details.) Your 22 Semi-Auto rifle should be cleaned within a reasonable time period after shooting. The correct procedure for cleaning is as follows:

1 Remove the barrel from the receiver as described on page 6.

2 ***USE A 22 RIFLE ROD AND PROPERLY SIZED PATCH SATURATED WITH A GOOD BRAND OF BORE CLEANER.*** Insert the rod and patch in the barrel and run it back and forth several times. Caution should be taken that the rod or handle does not strike the crown of the muzzle. Damage to this area can affect the accuracy of the rifle. During the barrel cleaning procedure, place the breech bolt in its open position to allow the end of the rod and patch to go completely through the bore and partly into the receiver.

3 ***INSPECT THE CHAMBER AND BORE FOR POWDER AND/OR LEAD FOULING.*** If any remaining powder or lead fouling cannot be removed by repeating step 2 above, it may be necessary to use a .22 caliber brass bore brush. Dip the brush in any good quality nitro bore solvent and scrub the chamber and bore until the fouling is removed. To prevent brass bristles from breaking off, the brush should be pushed completely through the bore before being withdrawn.

4 After fouling has been removed, the bore should be wiped dry. Finally, a patch, lightly oiled with a gun oil like Browning Oil, should be run through for protection.

5 ***REMOVE AND CLEAN THE BREECHBLOCK.*** Removing the breechblock may only be necessary occasionally. Test its function to be sure it operates smoothly — if not, it will need cleaning. When cleaning is required see the section titled "Disassembling the Mechanism" on page 8 for the proper procedure.

With the breechblock removed, clean the dirt and grease from the grooves on the top of the breechblock. Wipe off residue from the face of the breechblock and the opening of the magazine into the receiver. A good solvent may be necessary to remove blowback fouling. Any dried oil in these areas should be removed. Follow this cleaning with a very light film of oil on the affected parts. Do not pour large quantities of oil into the action. An excess of oil will run into the wood and cause it to soften or warp. Browning Oil aerosol is ideal for this light oiling.

If, after long use, the extractor begins to stick, it also should be removed and cleaned. The cartridge guide should be oiled, (not excessively), and a few drops occasionally should be put in the magazine tube. It is important to keep the locking threads of the barrel and receiver clean.

6 ***WIPE OFF EXPOSED METAL SURFACES WITH AN OILED CLOTH,*** making sure to wipe the rifle clean of all finger marks where moisture will accumulate. Ordinary good judgment will, of course, indicate that the metal of the rifle should receive a light film of oil any time the rifle has been exposed to bad weather or excessive handling.

7 ***THE WOOD SURFACES CAN ALSO BE WIPED LIGHTLY WITH BROWNING OIL*** or polished with any quality furniture wax, but not both.

8 The cleaning suggestions recommended above should be all that is necessary. ***FURTHER DISASSEMBLY IS NOT RECOMMENDED.***

Service or Repair

If your firearm should require service or repairs, we suggest you first contact a local recommended Browning Firearms Service Center. Contact your Browning sporting goods dealer or call our Service Department for the address of the Service Center nearest you. Otherwise, you may send your firearm directly to our own Service Department. For technical questions about your firearm or service call our Service Department.

Browning Service Department
3005 Arnold Tenbrook Road
Arnold, Missouri 63010-9406
Phone: 1-800-322-4626

Canadian Customers call or write:

Browning Canada Sports Ltd./Ltee,
5617 Chemin St-Francois
St-Laurent, Quebec H4S 1W6
Phone: (514) 333-7261

When returning your firearm for servicing, you *must* do the following:

a. Be sure it is completely unloaded.
b. Package it securely in a cardboard container.
c. Enclose a letter with your firearm that clearly describes the trouble experienced and the repairs or alterations desired.
d. If convenient, send a copy of the letter to us separately.
e. Never return ammunition with your firearm. It is against postal and most commerce regulations.

If you have any questions about this manual or about any other Browning products, call or write our Consumer Information Department:

Browning Consumer Information
Morgan, Utah 84050
Phone: (801) 876-2711